Permit Fact Sheet

General Information

Permit Number:	WI-0003085-09-0
Permittee Name:	Superior Refining Company LLC
Address:	2407 Stinson Avenue
City/State/Zip:	Superior WI 54880
Discharge Location:	Stinson Avenue; Outfall 001: N 46° 41.539' W 92° 03.919' Outfall 002: N 46° 41.542' W 92° 03.922' Outfall 003: N 46° 41.545' W 92° 03.916'
Receiving Water:	Newton Creek
StreamFlow ($Q_{7,10}$):	0 cfs
Stream Classification:	Limited Forage Fish

Facility Description

Prior to April 26, 2018, Superior Refining Company, LLC (SRC) refined crude oil to produce gasoline, kerosene, diesel fuel, heating oils, fuel oils, liquid petroleum gas, asphalt and elemental sulfur. Refinery processes performed were categorized as the "cracking process" subcategory in Chapter NR 279, Wis. Adm. Code for calculation of categorical limits.

On April 26, 2018, a fire occurred at SRC which halted production. Production has not resumed since. There are plans to discontinue the process wastewater discharge to Newton Creek once production resumes and send their effluent to the City of Superior POTW. However, one consequence of no production is that no process wastewater or cooling tower blowdown are generated onsite. Therefore, an average of 0.23 MGD of boiler blowdown, water softener backwash, and process area stormwater are treated in an activated sludge treatment system and discharged via Outfall 001 to Newton Creek. Stormwater from non-process areas (tank farms) is routed to stormwater lagoons and discharged to Newton Creek through Outfalls designated as 002 and 003. Outfall 002 has not been in use, as the stormwater stream from pond 4 is now routed through the WWTP with eventual monitoring and discharge through Outfall 001. However, Outfall 002 is maintained in this permit for emergency overflow conditions. Outfall 003 has an average flow rate of 21,000 gpd. Hydrostatic test water from periodic testing of tanks is treated in an oil water separator and discharged to Newton Creek through Outfall 004. Newton Creek flows approximately 2.5 miles to Hog Island Inlet that flows into Lake Superior Bay.

The activated sludge wastewater treatment system includes oil water separation, flow equalization, dissolved gas floatation, activated sludge, clarification, sand filtration, ammonia stripping, and pH neutralization. The approved wastewater treatment system also includes two lagoons for storage of wastewater as needed such as for storage for retreatment to meet effluent limits or for other beneficial uses which may enhance effluent quality.

Aqueous film-forming foam (AFFF) was used to manage the fire, and all of the recovered foam and water were held onsite in Fire Water Ponds 2 and 3, along with Stormwater Collection Pond 4, and WWTP Recycle Ponds 7 and 8. After determining that the AFFF contained per- and polyfluoroalkyl substances (PFAS), granular activated carbon (GAC) units and anion-exchange resin (IX) units were installed onsite to remove these substances prior to discharge to Newton Creek. To minimize the effect the discharge could have on public health and the environment, the department authorized this discharge under the Petroleum Contaminated Water General Permit (permit no. WI-0046531), with an understanding that

PFOA and PFOS would be treated to non-detectable levels prior to discharge. That permit and those conditions remain effective, separate from this individual permit.

Voluntary construction of a two-cell wetlands treatment system was completed in November 2004. Beginning September, 2007, treated process wastewater from the existing activated sludge treatment system was directed to the wetlands and discharged to Newton Creek at an unchanged discharge location via Outfall 001. Use of the constructed wetland has been discontinued for this permit reissuance.

Once production resumes and the process wastewater that is generated onsite is discharged to the City of Superior POTW, permit coverage will still be needed for the onsite stormwater runoff. It is anticipated that this permit will be terminated at that time, along with the Construction Stormwater General Permit (permit no. WI-S067831-05), with all stormwater discharged through Outfall 001 and treated through the GAC/IX system covered under the Petroleum Contaminated Water General Permit (Permit no. WI-0046531-06-0). All other untreated stormwater that is discharged will be covered under the Industrial Stormwater Tier 1 General Permit (permit no. WI-S067849-4).

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)**
701		All voluntary monitoring of the water supply for mercury shall be reported at this sample point. Sampling is performed at the city tap within Superior Refining Company's wastewater treatment plant.
105		DMR Sample Point for reporting results of mercury field blanks.
001		Boiler blowdown, water softener wastewater, process area stormwater runoff, construction area stormwater runoff, and stormwater collected in Fire Water Pond 2, Fire Water Pond 3, Fire Water Pond 5, Stormwater Collection Pond 4, WWTP Recycle Pond 7, and WWTP Recycle Pond 8 prior to discharge to Newton Creek.
002		Stormwater sampled after Storm Water Collection Pond 4 (overflow conditions only). Water from Pond 4 is now routed through the WWTP for treatment with eventual monitoring and discharge through Outfall 001.
003		Stormwater sampled after Outfall 003 (tank farm secondary containment stormwater).
004		Outfall 004 limits and requirements apply only to periodic direct discharge of treated hydrostatic test water to Newton Creek sampled prior to discharge. The hydrostatic test water shall be treated via an oil water separator prior to sampling and discharge.

1 Influent - Proposed Monitoring

1.1 Sample Point Number: 701- Water Supply Mercury Results

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Quarterly	Grab	Voluntary sampling point.

Changes from Previous Permit:

This is a new section in this permit.

Explanation of Limits and Monitoring Requirements

This table, outlining voluntary mercury sampling in the source water, is new to this permit, though it has been available in the DMRs by reference for the previous permit term.

2 Inplant - Proposed Monitoring and Limitations

2.1 Sample Point Number: 105- MERCURY FIELD BLANK

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Mercury, Total Recoverable		ng/L	Quarterly	Blank	

Changes from Previous Permit:

Sampling points 101 (PROCESS WW PLUS RUNOFF), 102 (RUNOFF VOLUME), 103 (DAILY RUNOFF ALLOWANCE), and 104 (MONTHLY RUNOFF ALLOWANCE) have been removed.

Explanation of Limits and Monitoring Requirements

Because there is no production occurring at this facility, the production-based categorical limitations found in ch. NR 279, Wis. Adm. Code, do not apply and have been removed from this permit. Consequently, the sampling points used to determine compliance with these categorical effluent limitations (101 – 104) have also been removed.

3 Surface Water - Proposed Monitoring and Limitations

3.1 Sample Point Number: 001- PRIMARY OUTFALL

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
Temperature Maximum	Weekly Avg	54 deg F	Daily	Continuous	Limit effective November and February beginning November 2021. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	57 deg F	Daily	Continuous	Limit effective March beginning 2022. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	63 deg F	Daily	Continuous	Limit effective April beginning 2022. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	70 deg F	Daily	Continuous	Limit effective May beginning 2022. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	77 deg F	Daily	Continuous	Limit effective June beginning 2022. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	81 deg F	Daily	Continuous	Limit effective July beginning 2021. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	79 deg F	Daily	Continuous	Limit effective August beginning 2021. See sections 3.2.1.2 and 3.2.1.3.
Temperature Maximum	Weekly Avg	73 deg F	Daily	Continuous	Limit effective September beginning 2021. See sections 3.2.1.2 and 3.2.1.3.
pH (Maximum)	Daily Max	9.0 su	Daily	Continuous	See section 3.2.1.5.
pH (Minimum)	Daily Min	6.0 su	Daily	Continuous	See section 3.2.1.5.
pH Total Exceedance Time Minutes	Monthly Total	446 minutes	Daily	Continuous	See section 3.2.1.5.
pH Exceedances Greater Than 60 Minutes	Daily Max	0 Number	Daily	Continuous	See section 3.2.1.5.
BOD5, Total	Daily Max	30 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Monthly Avg	15 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	30 mg/L	Weekly	24-Hr Flow Prop Comp	
Suspended Solids,	Monthly Avg	20 mg/L	Weekly	24-Hr Flow	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Total				Prop Comp	
Phosphorus, Total	Rolling 12 Month Avg	1.0 mg/L	Weekly	24-Hr Flow Prop Comp	Interim limit effective until June 30, 2021. See section 3.2.1.4.
Phosphorus, Total	Monthly Avg	0.225 mg/L	Weekly	24-Hr Flow Prop Comp	Limit effective July 1, 2021. See section 3.2.1.4.
Phosphorus, Total	6-Month Avg	0.075 mg/L	Weekly	24-Hr Flow Prop Comp	Limit effective July 1, 2021. See section 3.2.1.4.
Phosphorus, Total	6-Month Avg	0.15 lbs/day	Weekly	Calculated	Limit effective July 1, 2021. See section 3.2.1.4.
Dissolved Oxygen	Daily Min	4.0 mg/L	Weekly	Grab	
Oil & Grease (Hexane)		mg/L	Weekly	Grab	
Chloride		mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Daily Max	9.0 mg/L	Monthly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH3-N) Total	Monthly Avg	5.6 mg/L	Monthly	24-Hr Flow Prop Comp	
Mercury, Total Recoverable		ng/L	Quarterly	Grab	See section 3.2.1.1.
Barium, Total Recoverable	Weekly Avg	170 µg/L	Quarterly	Grab	Limit effective July 1, 2021.
Barium, Total Recoverable	Weekly Avg	0.52 lbs/day	Quarterly	Calculated	Limit effective July 1, 2021.
Sulfur, as Sulfide		mg/L	Quarterly	Grab	
Phenols, Total		µg/L	Quarterly	24-Hr Flow Prop Comp	
Chromium +6		µg/L	Quarterly	Grab	
Chromium, Total Recoverable		µg/L	Quarterly	24-Hr Flow Prop Comp	
Arsenic, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Cadmium, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Copper, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Cyanide, Amenable		µg/L	See Permit Note	Grab Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Lead, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					See section 3.2.1.8.
Nickel, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Selenium, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Silver, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Zinc, Total Recoverable		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Hardness, Total as CaCO3		mg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
PAHs		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See sections 3.2.1.8 and 3.2.1.7.
BHC, alpha		µg/L	See Permit Note	24-Hr Flow Prop Comp	Sampling required every other year beginning 2020. See section 3.2.1.8.
Chlordane		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
4,4'-DDT		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
4,4'-DDE		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
Heptachlorepoxide		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
Hexachlorobenzene		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
PCB Total		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
Dioxin, 2,3,7,8-TCDD		ng/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
Dieldrin		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					3.2.1.9.
Toxaphene		µg/L	Once	24-Hr Flow Prop Comp	Sampling required once during 2020. See section 3.2.1.9.
Chronic WET	Monthly Avg	11 TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See section 3.2.1.6.

Changes from Previous Permit

Outfall Name changed from “PROCESS WW OUTFALL” to “PRIMARY OUTFALL” to better reflect discharge.

Temperature reporting frequency increased from “3/Week” to “Daily”, along with Weekly Average temperature limitations, effective per the compliance schedule.

pH limitations, as they are represented in the table, are changed from a minimum of 4.0/a maximum of 11.0 to 6.0 and 9.0, respectively.

Monitoring frequency for BOD5 and TSS is reduced from “3/Week” to “Weekly”.

Future phosphorus concentration limitations are now explicitly included in the table, though they are unchanged from the previous permit. A mass limit of 0.15 lbs/day, expressed as a 6-month average, and based on the future concentration limit of 0.075 mg/L and the average flow of 0.235 MGD, has been added. Monitoring frequency for phosphorus is reduced from “2/Week” to “Weekly".

Monitoring frequency for Dissolved Oxygen is reduced from “Daily” to “Weekly”.

Monitoring frequency for Oil & Grease (Hexane) is reduced from “2/Week” to “Weekly”.

Chloride effluent limitation is removed. Monitoring frequency for chloride is reduced from “2/Week” to “Weekly”

Monitoring frequency for Ammonia is reduced from “2/Week” to “Monthly”.

Monitoring for COD is removed.

Mercury effluent limitation is removed.

Monitoring for Barium is required quarterly, along with effluent limitations going into effect per the compliance schedule.

Monitoring frequency for Sulfur, Phenols, and Chromium +6 is reduced from “Monthly” to “Quarterly”.

Monitoring frequency for Arsenic, Cadmium, Copper, Cyanide, Lead, Nickel, Selenium, Silver, Zinc, Hardness, and PAHs is reduced from “Annual” to once every other year.

Monitoring for Octachlorostyrene is removed.

An Acute WET test is no longer needed for this permit term.

A Chronic WET limit is established for this outfall.

Explanation of Limits and Monitoring Requirements

Monitoring frequency reduction on most of the parameters in the above table is due largely in part to the significant changing of the content of the water being discharged through Outfall 001. Data since 06/2018 is considered representative of the current discharge, and, based on the past year of sampling (see Appendix A), a lowered reasonable

potential to exceed water quality-based effluent limitations drives the relaxed monitoring requirements. Also, see Appendix B for a complete explanation of all water quality-based effluent limitations.

Temperature
Comparison of the highest reported effluent temperature to the calculated effluent limitations for Limited Forage Fish determines the reasonable potential of exceeding the effluent limits. A 20-month compliance schedule is included to meet the effluent limitations outlined in the table above. It is anticipated that compliance with these effluent limitations will be achieved by directing the discharge to the City of Superior POTW. The change in monitoring frequency for temperature is based on the method of data collection. Pursuant to s. NR 205.07(1)(r)2., Wis. Adm. Code, when a permittee monitors for a parameter (in this case, temperature), more frequently than required by the permit, then the results must be submitted in the eDMR. To accommodate for this, the reporting frequency is changed to "Daily".

pH
It is important to note that effluent limitations for pH have not changed in this reissued permit, only how they are shown in the monitoring table for Outfall 001. 6.0 and 9.0 have always been the effluent limitations for pH, with 4.0 and 11.0 being the boundaries for partial exceedances, allowed under s. NR 205.06, Wis. Adm. Code.

BOD_5
Based on the department's analysis of the levels of BOD_5 in the effluent, reducing the monitoring frequency to once a week is determined to be appropriate. Given that the discharge of BOD_5 in the effluent averages about 16% of the monthly average effluent limitation of 15 mg/L, the department is basing this reduction in monitoring frequency on the EPA's April 19, 1996 memo *Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies*.

TSS
Based on the department's analysis of the levels of TSS in the effluent, reducing the monitoring frequency to once a week is determined to be appropriate. Given that the discharge of TSS in the effluent averages about 5% of the monthly average effluent limitation of 20 mg/L, the department is basing this reduction in monitoring frequency on the EPA's April 19, 1996 memo *Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies*.

Phosphorus
The effluent limitations for phosphorus are unchanged, and, given the variability of the representative discharge samples for 6/2018 – 5/2019, the interim limit is maintained at 1.0 mg/L as a rolling 12-month average. Compliance with future limitations is anticipated to be met by re-routing the effluent to the City of Superior POTW. Based on the low likelihood of exceedance of the interim limit, with average discharge levels being approximately 11% of the interim effluent limitation, monitoring frequency has also been aligned with other parameters.

Dissolved Oxygen
Based on the low likelihood of exceedance of the 4.0 mg/L daily minimum effluent limitation and the low variability in the discharge levels, the monitoring frequency is reduced to once a week.

Oil & Grease (Hexane)
Based on the recent consistency of concentrations in the effluent, the monitoring frequency is reduced.

Chloride
Since the discontinuation of production, Chloride effluent concentrations have significantly decreased to the point that there is no reasonable potential to exceed the effluent limitation of 400 mg/L. Given that the discharge of Chloride in the effluent averages about 31% of the weekly average effluent limitation of 400 mg/L, the department is basing this reduction in monitoring frequency on the EPA's April 19, 1996 memo *Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies*.

Ammonia
Based on the department's analysis of the levels of Ammonia in the effluent, reducing the monitoring frequency to once a month is determined to be appropriate. Given that the discharge of Ammonia in the effluent averages about 1% of the monthly average effluent limitation of 5.6 mg/L, the department is basing this reduction in monitoring frequency on the EPA's April 19, 1996 memo *Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies*.

COD
Due to the maintained monitoring of BOD_5 and the low likelihood of limit exceedances of that parameter, in addition to the lack of process wastewater discharged through this outfall, monitoring for COD is deemed redundant and no longer required.

Mercury
Since the discontinuation of production, Mercury effluent concentrations have significantly decreased to the point that there is no reasonable potential to exceed the monthly average effluent limitation of 1.3 ng/L. To ensure that SRC is not a significant source of Mercury, quarterly monitoring is maintained in this permit.

Barium
Based on the single reported effluent result of 35.5 µg/L for Barium, which exceeds $1/5^{th}$ of the effluent limitation (170 µg/L), a weekly average limit is needed; a corresponding mass limitation of 0.52 lbs/day is also needed. A compliance schedule is established to allow for SRC to explore options with regards to complying with this effluent limitation.

Sulfur, Phenols, Chromium +6, Total Recoverable Chromium, Arsenic, Cadmium, Copper, Cyanide, Lead, Nickel, Selenium, Silver, Zinc, Hardness, and PAHs
Because of the significant change in the source of pollutants in the effluent and the consistency of results for these pollutants, monitoring frequency is reduced.

Chlordane, 4,4'-DDT, 4,4'-DDE, Heptachlorepoxide, Hexachlorobenzene, PCB, Dioxin, 2,3,7,8-TCDD, Dieldrin, and Toxaphene
Monitoring for persistent bioaccumulating substances (BACs) in the Table above is retained from the previous permit to continue to document that bioaccumulators are not discharged even though all results were reported as nondetectable. Monitoring is required once with the next permit reissuance application. Heptachlorepoxide, Dieldrin, Chlordane, 4,4 DDT and 4,4 DDE have been identified as critical pollutants of concern for Lake Superior as referenced above.

The requirement to notify and study the reduction of any discharge of identified bioaccumulating substances identified as critical pollutants for Lake Superior has been retained from the previous permit. Monitoring of bioaccumulating substances is required in 2020.

Octachlorostyrene
Monitoring for Octachlorostyrene is removed because SRC was unsuccessful in identifying a lab that could sample for that parameter. Correspondence between the EPA and the department determined that because no labs could sample for this parameter, and monitoring for the other BACs is maintained, that monitoring requirement is removed.

3.2 Sample Point Number: 002- POND 4 EMERGENCY OVERFLOW

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Per Occurrence	Estimated	See section 3.2.2.1.
Oil & Grease (Hexane)	Daily Max	30 mg/L	Per Occurrence	Grab	See section 3.2.2.1.
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Per Occurrence	Grab	See section 3.2.2.1.
PFOA		ng/L	Per Occurrence	Grab	Perfluorooctanoic acid. See section 3.2.2.1.
PFOS		ng/L	Per Occurrence	Grab	Perfluorooctane sulfonate. See section 3.2.2.1.

Changes from Previous Permit

Outfall Name changed from "STORMWATER RUNOFF" to "POND 4 EMERGENCY OVERFLOW" to more accurately describe discharge.

Sample Frequency changed from "Monthly" for Flow Rate, and "Weekly" for Oil & Grease, to "Per Occurrence".

Sampling for PFOA and PFOS is now required.

Explanation of Limits and Monitoring Requirements

These effluent limitations represent the department's best professional judgement for potentially contaminated stormwater that is discharged. Sampling for PFOA and PFOS has been added due to the known presence of these contaminants.

3.3 Sample Point Number: 003- STORMWATER RUNOFF

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Monthly	Estimated	
Oil & Grease (Hexane)	Daily Max	30 mg/L	Weekly	Grab	
Oil & Grease (Hexane)	Monthly Avg	15 mg/L	Weekly	Grab	

Changes from Previous Permit

No changes.

Explanation of Limits and Monitoring Requirements

These effluent limitations represent the department's best professional judgement for potentially contaminated stormwater that is discharged.

3.4 Sample Point Number: 004- HYDROSTATIC TEST WATER

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Per Occurrence	Estimated	See section 3.2.4.1.
Oil & Grease (Hexane)	Daily Max	15 mg/L	Per Occurrence	Grab	See section 3.2.4.1.
Suspended Solids, Total	Daily Max	30 mg/L	Per Occurrence	Grab	See section 3.2.4.1.
Suspended Solids, Total	Monthly Avg	20 mg/L	Per Occurrence	Grab	See section 3.2.4.1.
Dissolved Oxygen	Daily Min	4.0 mg/L	Per Occurrence	Grab	See section 3.2.4.1.
pH Field	Daily Max	9.0 su	Per Occurrence	Grab	See section 3.2.4.1.
pH Field	Daily Min	6.0 su	Per Occurrence	Grab	See section 3.2.4.1.

Changes from Previous Permit

Sample frequency for all parameters for Hydrostatic Test Water has been changed from “Daily” to “Per Occurrence”.

Explanation of Limits and Monitoring Requirements

“Per Occurrence” is a more appropriate monitoring frequency as this outfall is rarely used. These limitations originate using similar requirements in the Hydrostatic Test Water General Permit.

4 Compliance Schedules

4.1 Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus

The permittee shall comply with the WQBELs for Phosphorus as specified. No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification requirement.

Required Action	Due Date
Construction Upgrade Progress Report #1: The permittee shall submit a progress report on construction upgrades, or provide the department with an update on the progress with complying with the final WQBELs.	06/30/2020
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades.	06/30/2021
Achieve Compliance: The permittee shall achieve compliance with final phosphorus WQBELs.	07/01/2021

4.2 Temperature Limits

This compliance schedule requires the permittee to achieve compliance by the specified date

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent temperature with conclusions regarding compliance. If the Department determines that because of data variability, 24 months of monitoring data is required to determine the need for temperature limits, the Department will so notify the permittee in writing and all dates in the permit schedule will be extended by 12 months.	06/30/2020
Action Plan: Submit an action plan for complying with all effluent temperature limits that remain following the Department's review for necessity.	12/31/2020
Complete Actions: Complete actions necessary to achieve compliance with effluent temperature limits.	07/31/2021
Achieve Compliance: The permittee shall achieve compliance with the weekly average temperature limits.	08/01/2021

4.3 Barium Limit

The permittee shall complete the below actions to ensure that compliance with the Barium water quality-based effluent limitations of 170 µg/L and 0.52 lbs/day are met.

Required Action	Due Date
Report on Effluent Discharges: Submit a report on levels of Barium in the effluent with conclusions regarding compliance.	06/30/2020
Action Plan: Submit an action plan for complying with the effluent barium limit.	12/31/2020
Complete Actions: Complete actions necessary to achieve compliance with the weekly average effluent barium limit.	07/31/2021
Achieve Compliance: The permittee shall achieve compliance with the weekly average effluent barium limit.	08/01/2021

Explanation of Compliance Schedules

Water Quality Based Effluent Limits (WQBELs) for Total Phosphorus
SRC requested that the effective date of the phosphorus WQBELs be changed from 04/01/2021 to 07/01/2021. This request was granted, as, pursuant to s. NR 217.17(2), Wis. Adm. Code, any phosphorus compliance schedule established by the department "may not exceed seven years from the date a permit was first modified or reissued to include a water quality based phosphorus limit". Because the effective date of the previous permit was 07/01/2014, this change the effective date is allowable.

Temperature Limits
New temperature limits are established for this permit reissuance, and compliance with them will not be immediate. Therefore, this compliance schedule gives SRC 20 months to either develop a strategy to comply with the limitations, or construct a system to meet these limitations.

Barium Limit
SRC has the option of reevaluating a need for a Barium limit by submitting the results of 10 more samples to calculate a 1-day P99. This compliance schedule gives SRC 20 months to either perform this analysis, or complete other steps necessary to ensure compliance with the effluent limitation.

5 Standard Requirements

Changes from Previous Permit

Section 5.1.7: Reporting Requirements – Alterations or Additions, Section 5.2.6: Operator Certification, and Section 5.3.5: Surface Water Uses and Criteria, have all been added to the "Standard Requirements" section.

Explanation of Changes

These sections are all standard requirements for all WPDES permits issued, which have been updated since the last permit reissuance.

Other Comments:

Outfalls 011 and 021 from the previous permit were removed for this reissuance as there is no production occurring to base categorical effluent limitations on.

Attachments:

Appendix A: Summary of eDMR Data June 2018 – May 2019
Appendix B: Water Quality-Based Effluent Limitations Memo, signed 09/09/2019
Appendix C: Substantial Compliance Determination, signed 09/06/2019

Proposed Expiration Date:

11/30/2024

Prepared By:
Nate Willis
Wastewater Engineer
Bureau of Water Quality

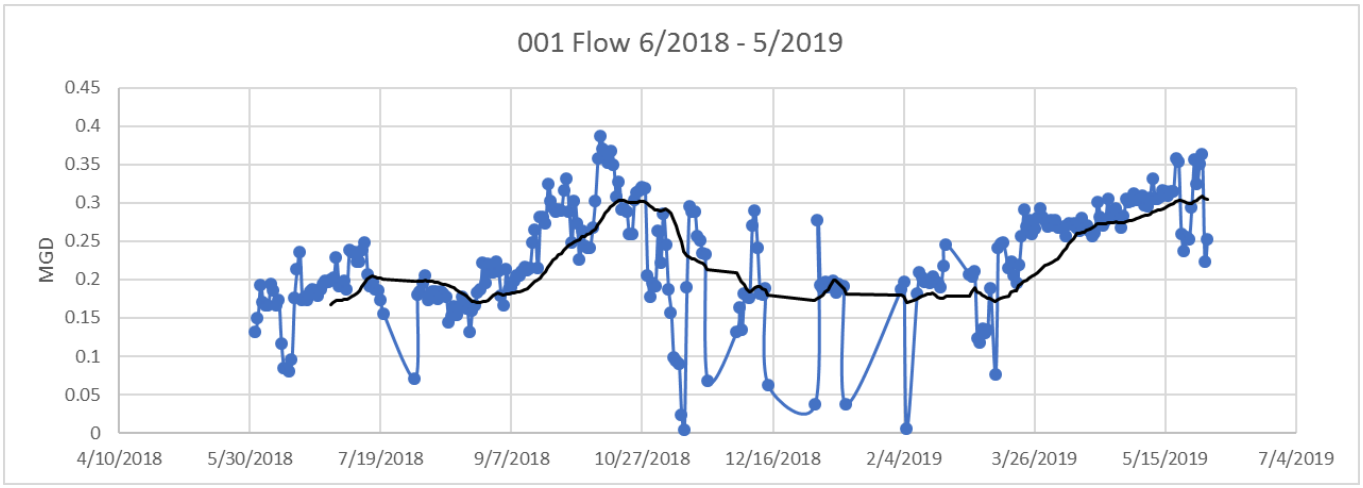
Date:
10/14/2019

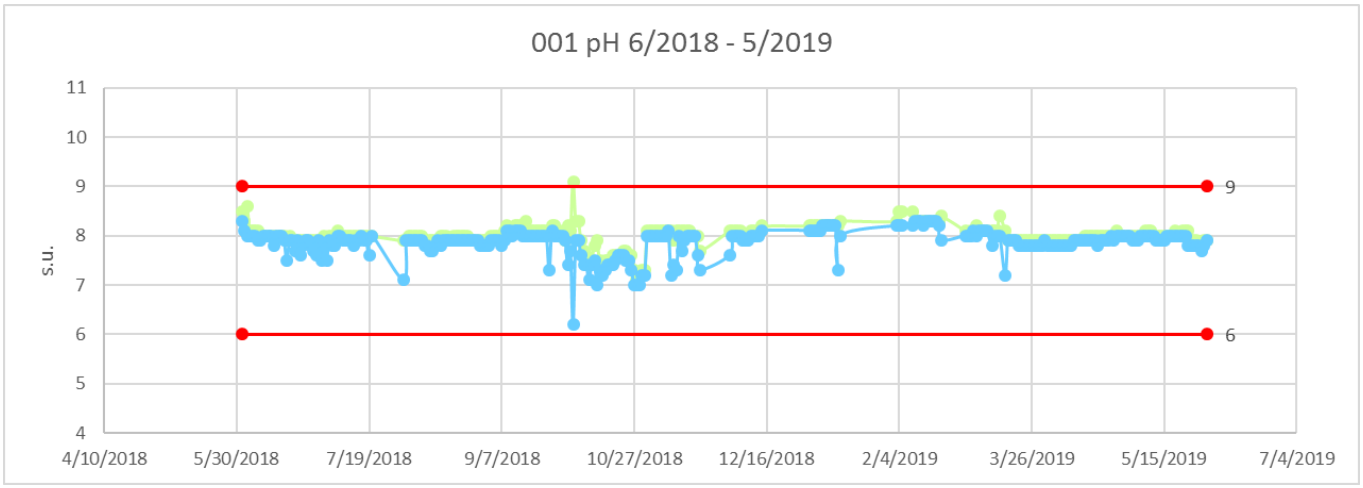
cc:
Eric DeVenecia, *DNR*

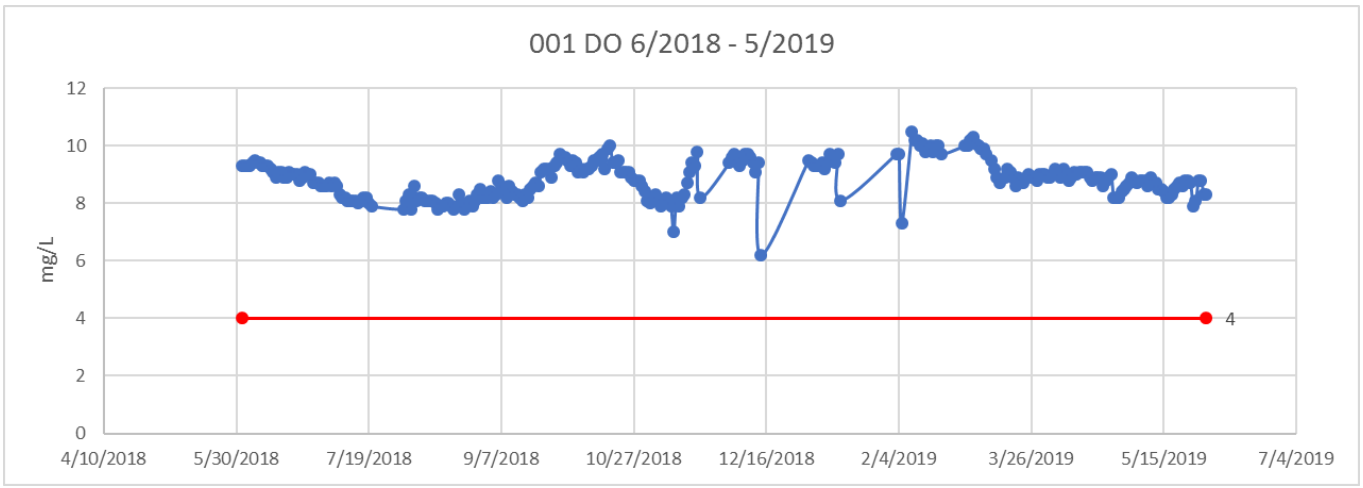
APPENDIX A

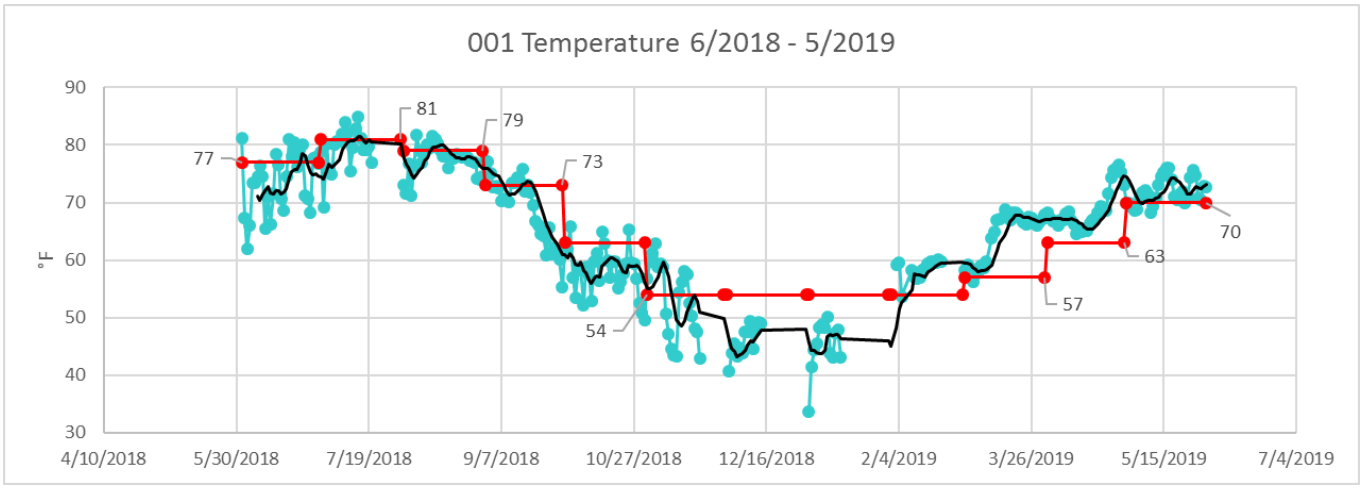
SUMMARY OF EDMR DATA 6/2018 – 5/2019

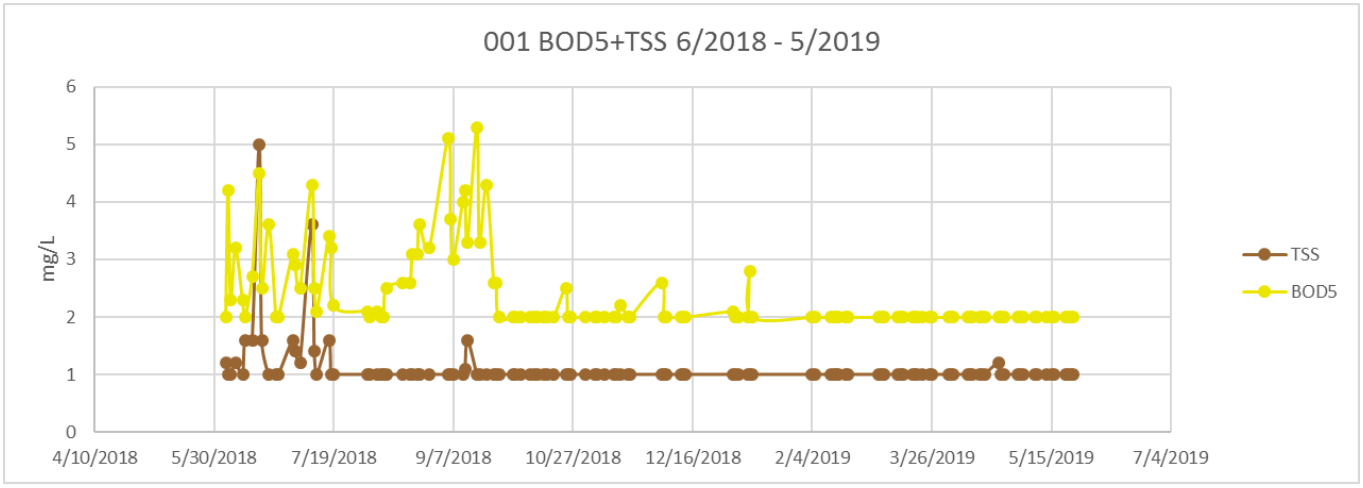
Outfall 001:

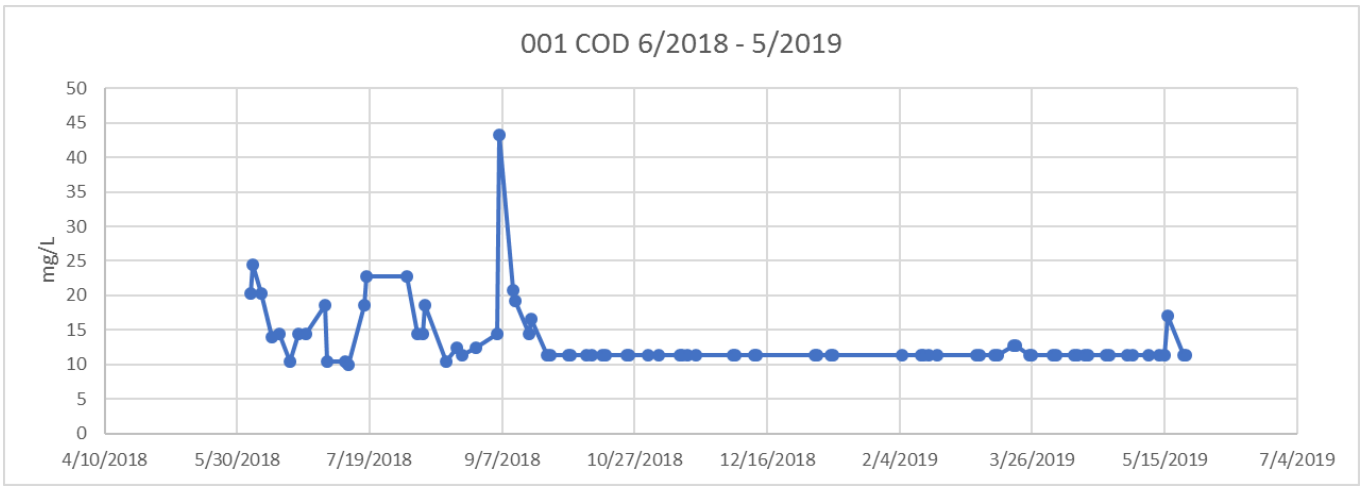


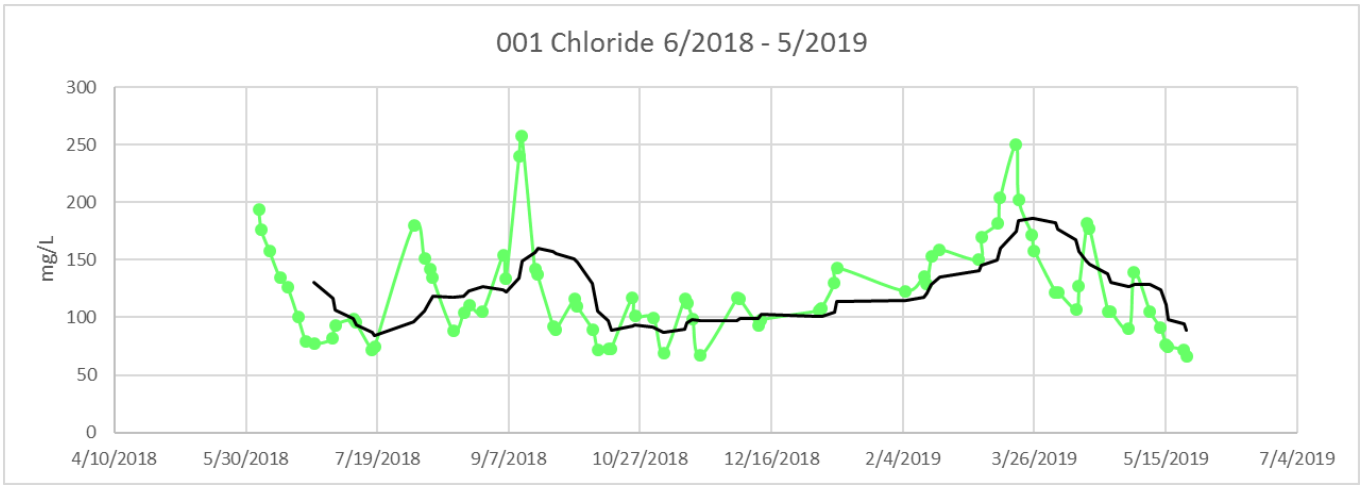


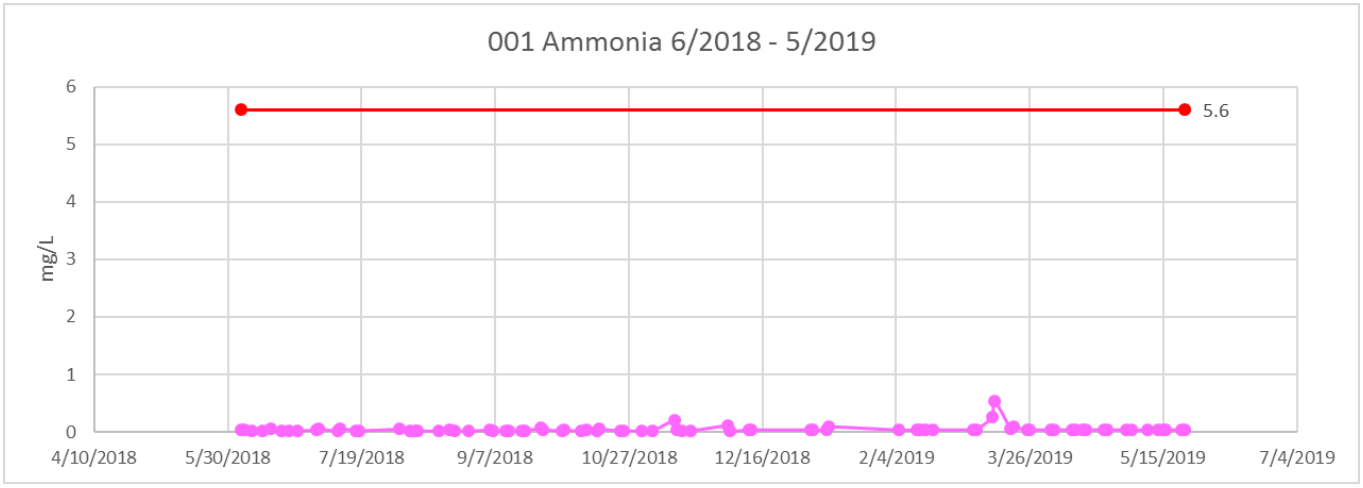


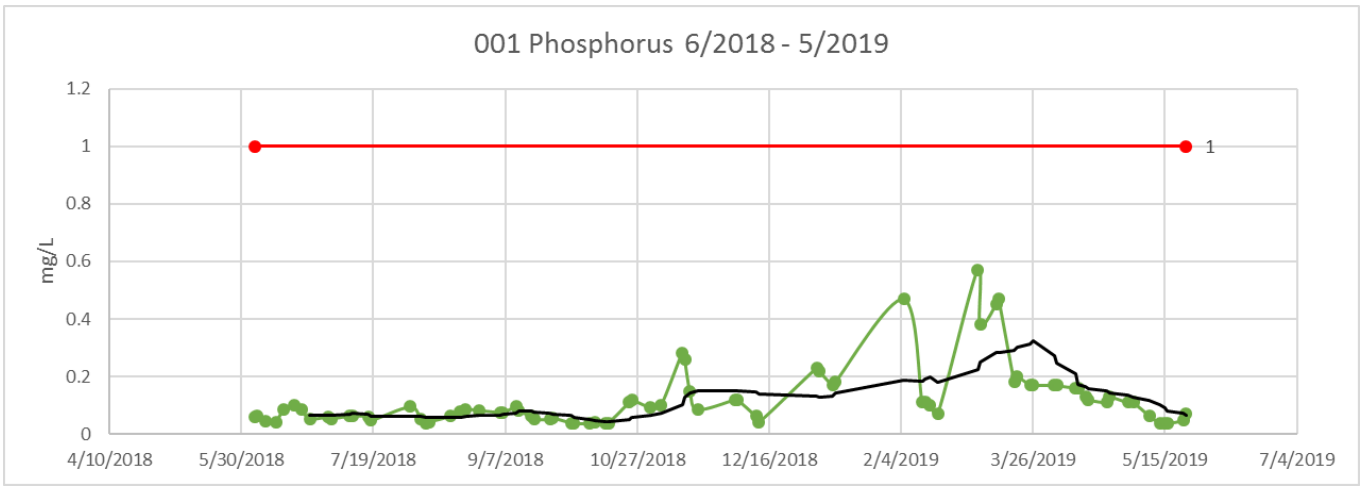

001 Temperature 6/2018 - 5/2019
°F
90
80
70
60
50
40
30
77
81
79
73
54
57
63
70
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019

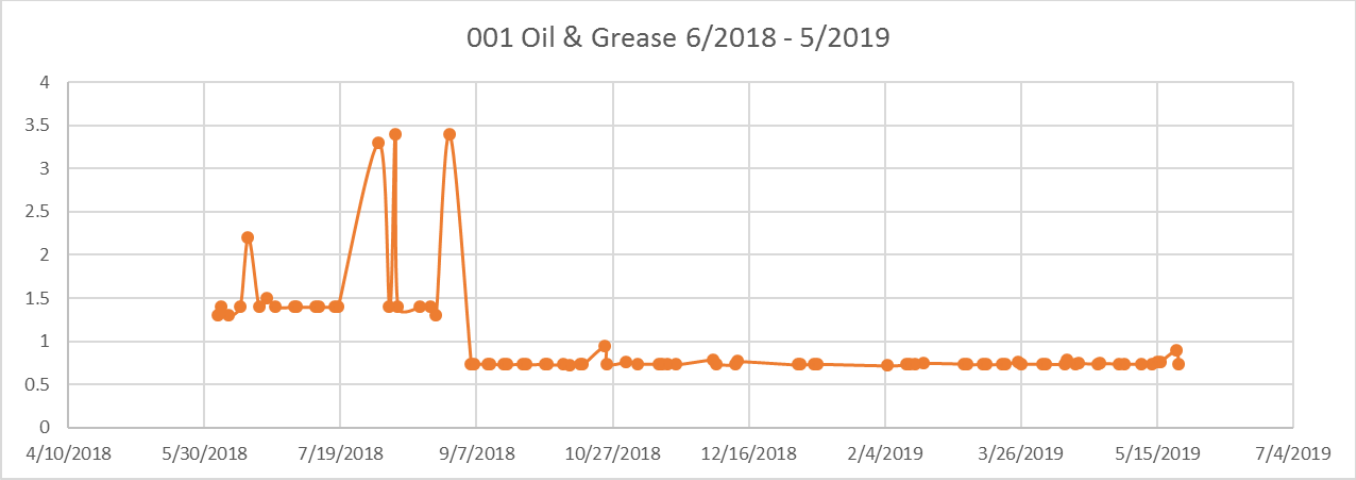

001 BOD5+TSS 6/2018 - 5/2019
mg/L
6
5
4
3
2
1
0
TSS
BOD5
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019

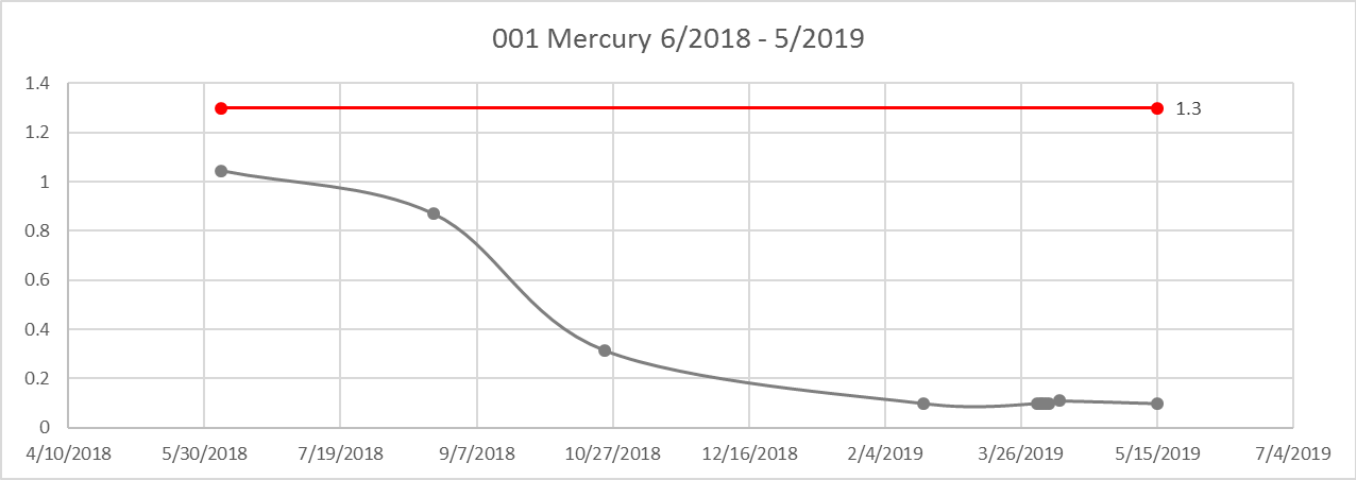

001 COD 6/2018 - 5/2019
mg/L
50
45
40
35
30
25
20
15
10
5
0
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019


001 Chloride 6/2018 - 5/2019
mg/L
300
250
200
150
100
50
0
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019


001 Ammonia 6/2018 - 5/2019
mg/L
6
5
4
3
2
1
0
5.6
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019


001 Phosphorus 6/2018 - 5/2019
mg/L
1.2
1
0.8
0.6
0.4
0.2
0
1
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019





	Arsenic (ug/L)	Cd	Cu	Cyanide	Pb	Ni (ug/L)
10/30/2018	2.6	ND	ND	ND	ND	6.1

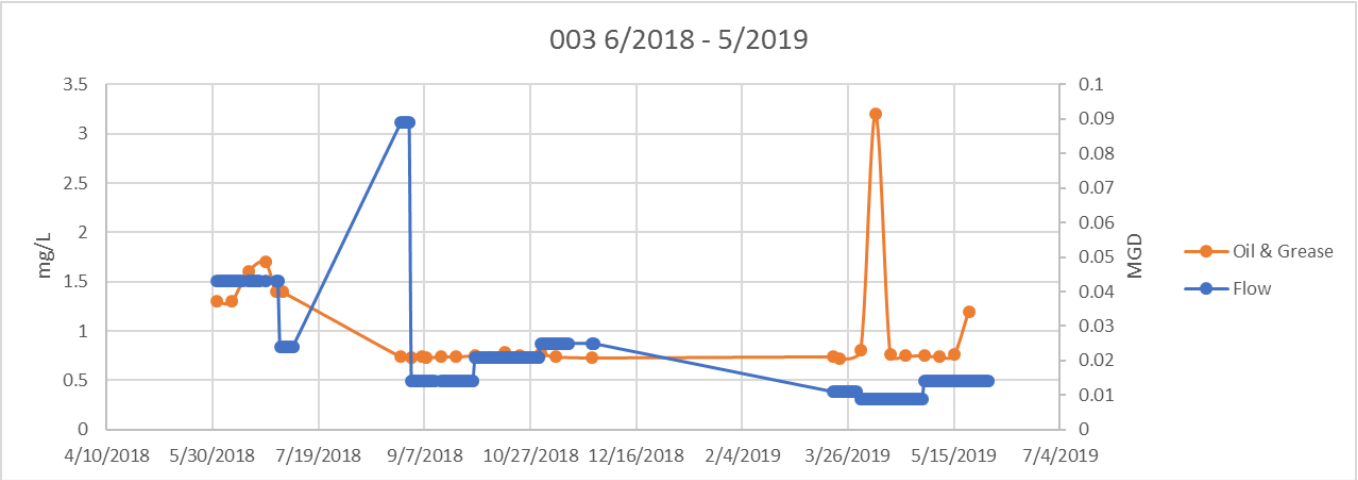
	Se (ug/L)	Ag	Zn (ug/L)	Hardness (mg/L)	PAHs (ug/L)
10/30/2018	1.6	ND	9.2	138	0.0193

	BHC Alpha	Chlordane	4,4'-DDT	4,4'-DDE	Heptachlorepoxide
10/30/2018	ND	ND	ND	ND	ND

	Hexachlorobenzene	PCB Total	in 2,3,7,8-T	Dieldrin	Toxaphene
10/30/2018	ND	ND	ND	ND	ND

	Cr +6 (ug/L)	Cr, TR (ug/L)	Phenols (ug/L)	Sulfide (mg/L)
6/4/2018	1.2	0.16	15.1	0.023
7/2/2018	1.2	0.16	15.1	0.013
8/8/2018	1.2	0.16	15.1	0.013
9/5/2018	0.62	0.16	15.1	0.013
10/2/2018	0.62	0.16	9.6	0.013
11/1/2018	0.62	0.16	9.6	0.013
12/4/2018	0.62	0.16	9.6	0.013
1/10/2019	0.62	0.16	9.6	0.013
2/12/2019	0.62	0.17	9.6	0.013
3/6/2019	0.62	0.16	9.6	0.013
4/3/2019	0.62	1	9.6	0.013
5/1/2019	0.62	1	9.6	0.013

Outfall 003:


003 6/2018 - 5/2019
mg/L
MGD
3.5
3
2.5
2
1.5
1
0.5
0
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
4/10/2018
5/30/2018
7/19/2018
9/7/2018
10/27/2018
12/16/2018
2/4/2019
3/26/2019
5/15/2019
7/4/2019
Oil & Grease
Flow